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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/729,279

12/05/2000

Takeshi Yamawaki

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12/08/2003

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EXAMINER

LEE, SUSAN SHUK YIN

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 12/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/729,279

Applicant(s)

YAMAWAKI ET AL.

Examiner

Susan S. Lee

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16 is/are allowed.
- 6) ☒ Claim(s) 18, 19, 21, 22, 24, 25, 29-32, 34, 35, 37, 38, 42 and 43 is/are rejected.
- 7) ☒ Claim(s) 20, 23, 26-28, 33, 36 and 39-41 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18, 19, 21, 22, 24, 25, 29/18, 29/19, 29/21, 29/22, 29/24, 29/25, 30/18, 30/19, 30/21, 30/22, 30/24, 30/25, 31, 32, 34, 35, 37, 38, 42/31, 42/32, 42/34, 42/35, 42/37, 42/38, 43/31, 43/32, 43/34, 43/35, 43/37, and 43/38 rejected under 35 U.S.C. 103(a) as being unpatentable over Herloski et al. (4,355,859) in view of Toyoda (Japan, 759).

Herloski et al. discloses a raster scanner used to write images on a photoconductive surface 12 of a photoconductor in a xerographic apparatus for subsequent development and transfer to a copy substrate material, and the transferred image thereafter fixed to form a permanent copy. A laser assembly from the raster scanner can be pivoted so as to align with the axis of the laser beam 25 with the optical axis of the scanner. The laser assembly shows that it has lens 67 that reads on the instant invention's optical element. Mirror 24, mirror 30, mirror 33, and lens 45 read on the instant invention's incident optical system. Scanner 10 reads on the instant invention's optical deflector. Lens 45, mirror 33, mirror 30, mirror 47, and slot-like aperture 49 read on the instant invention's imaging optical system. Note abstract,

column 2, line 58- column 4, line 36. The shifting direction is shown with arrows in Fig. 3 which reads on the predetermined direction with respect to the optical axis of the incident optical system. The light beam emerging from the incident optical system is obliquely incident on the deflecting surface of the scanner or optical deflector 10 in a main scanning cross-section (see Fig. 3). A controller for converting code data input from an external device into an image signal, and inputting the signal to the optical scanning apparatus is an inherent feature in Herloski et al. because it is mentioned that in a case where a scanner serves to produce or write images, a modulator is disposed astride the beam path to vary intensity of the beam in accordance with video image signals input thereto. Note column 1, lines 9-20.

Herloski et al. differs from the instant invention by not disclosing an incident optical system arranged to direct light beam from the laser unit to strike an optical deflector maintaining a width of the light beam wider than a width of a deflecting surface of the optical deflector in a main scanning direction.

Toyoda discloses a light scanning optical device where a width of a luminous flux emitted from the lens 2 is formed so as to become wider than the width of deflection surface 4a of polygon mirror or optical deflector 4. This is done so that changes in the width of the luminous flux in accordance to the revolution of the optical deflector 4 can be minimized. Note abstract.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Herloski et al. with that of Toyoda so

Art Unit: 2852

that changes of width of laser beam caused by the revolution of the optical deflector can be minimized as disclosed by Toyoda.

***Allowable Subject Matter***

Claims 20, 23, 26-28, 29/20, 29/23, 29/26, 29/27, 29/28, 30/20, 30/23, 30/26, 30/27, 30/28, 33, 36, 39-41, 42/33, 42/36, 42/39, 42/40, 42/41, 43/33, 43/36, 43/39, 43/40, and 43/41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-16 are allowed over the prior art of record.

Applicant's arguments with respect to claims 18, 19, 21, 22, 24, 25, 29/18, 29/19, 29/21, 29/22, 29/24, 29/25, 30/18, 30/19, 30/21, 30/22, 30/24, 30/25, 31, 32, 34, 35, 37, 38, 42/31, 42/32, 42/34, 42/35, 42/37, 42/38, 43/31, 43/32, 43/34, 43/35, 43/37, and 43/38 have been considered but are moot in view of the new ground(s) of rejection.

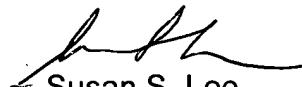
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ando (Japan, 952) discloses an optical scanning device wherein the width of the light beam is set wider than the width of a deflection surface of the optical deflector.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan S. Lee whose telephone number is 703-308-2138. The examiner can normally be reached on Mon. - Fri., 10:30-8:00, Second Monday Off.

Art Unit: 2852

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Art Grimley can be reached on 703-308-1373. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3432 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Susan S. Lee  
Primary Examiner  
Art Unit 2852

sl  
December 3, 2003